

CLAIMS

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- 1. A process for regulating the porosity and printing properties of uncoated paper, the process comprising using a sufficient quantity of colloidal PCC having a BET surface
 5 area of 10-100 m²/g as a filler to achieve a desired porosity of the paper.
 - 2. A process according to claim 1, wherein the paper is wood-containing paper.
- 3. A process according to claim 2, wherein the paper is SC paper, in particular SC-A paper, and wherein colloidal PCC is used in a quantity sufficient to achieve a porosity of at most 0.30 μm/Pas, e.g. at most 0.28 μm/Pas, e.g. at most 0.26 μm/Pas, e.g. at most 0.24 μm/Pas, e.g. at most 0.22 μm/Pas.
- 4. A process according to claim 2, wherein the paper is SC-B paper, and wherein colloidal PCC is used in a quantity sufficient to achieve a porosity of at most 0.60 μ m/Pas, e.g. at most 0.50 μ m/Pas, e.g. at most 0.40 μ m/Pas, e.g. at most 0.35 μ m/Pas.
- 5. A process according to claim 2, wherein the paper is newsprint, and wherein colloidal PCC is used in an amount sufficient to achieve a porosity of at most $20 \,\mu\text{m/Pas}$, e.g. at most $18 \,\mu\text{m/Pas}$, e.g. at most $16 \,\mu\text{m/Pas}$.
 - 6. A process according to any of the preceding claims, wherein the colloidal PCC has a BET surface area of 15-50 m^2/g .
 - 7. A process according to claim 6, wherein the colloidal PCC has a BET surface area of 20-30 m^2/g .
- 8. A process according to any of the preceding claims, wherein colloidal PCC is30 incorporated into the paper in an amount of at least about 1% by weight based on the total weight of the paper.
 - 9. A process according to claim 8, wherein colloidal PCC is incorporated into the paper in an amount of at least about 2% by weight based on the total weight of the paper.

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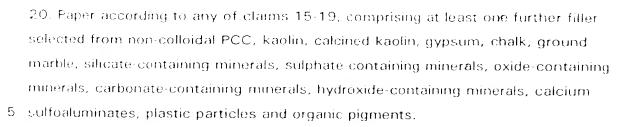
- 10. Paper containing colloidal PCC having a BET surface area of 10-100 m^2/g as a filler.
- 5 11. Paper according to claim 10, comprising at least one further filler selected from non-colloidal PCC, kaolin, calcined kaolin, gypsum, chalk, ground marble, silicate-containing minerals, sulphate-containing minerals, oxide-containing minerals, carbonate-containing minerals, hydroxide-containing minerals, calcium sulfoaluminates, plastic particles and organic pigments.

12. Paper according to claim 10 or 11, wherein the colloidal PCC has a BET surface area of 15-50 m²/g, e.g. 20-30 m²/g.

- 13. Paper according to any of claims 10-12, said paper being uncoated.
 - 14. Paper according to any of claims 10-13, wherein the colloid PCC is present in an amount of at least about 1% by weight, e.g. at least about 2% by weight, based on the total weight of the paper.
- 20 15. Uncoated wood-containing paper containing colloidal PCC.
 - 16. SC paper containing colloidal PCC and having a porosity of at most 0.30 μ m/Pas, e.g. at most 0.28 μ m/Pas, e.g. at most 0.26 μ m/Pas, e.g. at most 0.24 μ m/Pas, e.g. at most 0.22 μ m/Pas.

17. SC paper according to claim 16, wherein the paper is SC-A paper.

- 18. SC-B paper containing colloidal PCC and having a perosity of at most
 0.60 μm/Pas, e.g. at most 0.50 μm/Pas, e.g. at most 0.40 μm/Pas, e.g. at most
 30.35 μm/Pas.
 - 19. Newsprint containing colloidal PCC and having a porosity of at most 20 μm/Pas, e.g. at most 18 μm/Pas, e.g. at most 16 μm/Pas.



- 21. Paper according to any of claims 15-20, wherein the colloidal PCC has a BET surface area of 10-100 m^2/g , e.g. 15-50 m^2/g , e.g. 20-30 m^2/g .
- 10 22. A pigment mixture suitable for paper manufacture and comprising colloidal PCC having a BET surface area of 10-100 m²/g in combination with at least one filler selected from the following pigments: kaolin, calcined kaolin, gypsum, chalk, ground marble, silicate-containing minerals, sulphate-containing minerals, oxide-containing minerals, carbonate-containing minerals, hydroxide-containing minerals, calcium sulfoaluminates, plastic particles and organic pigments.
 - 23. A pigment mixture suitable for paper manufacture and comprising a combination of colloidal PCC having a BET surface area of $10-100 \text{ m}^2/\text{g}$ and non-colloidal PCC.
- 20 24. A pigment mixture according to claim 22 or 23, wherein the colloidal PCC has a BET surface area of 15-50 m²/g, e.g. 20-30 m²/g.
 - 25. A pigment mixture according to any of claims 22-24, wherein the colloidal PCC comprises aggregates/agglomerates having an equivalent spherical particle size in the
- 25 range 0.1-5.0 μm, e.g. 0.2-4 μm, typically 0.5-3.0 μm, wherein the aggregates/agglomerates consist of single crystals having an equivalent spherical particle size of about 0.01-0.50 μm.

